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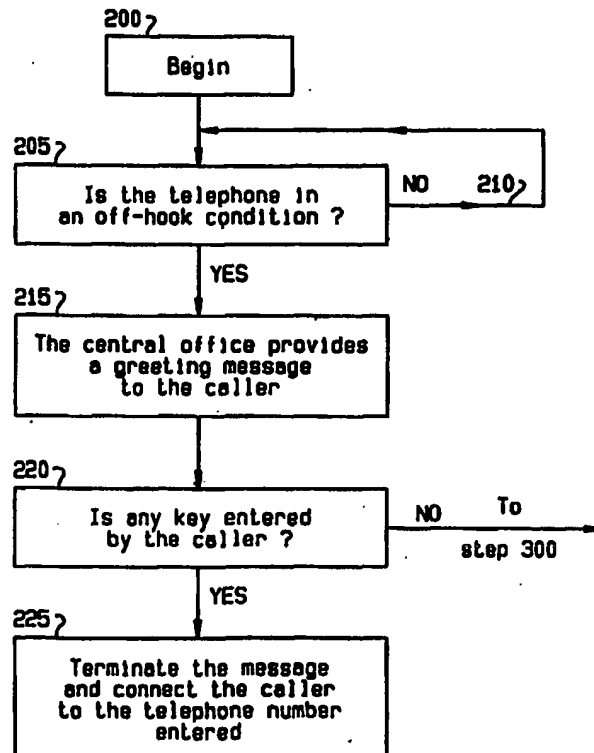
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| (21) International Application Number: PCT/US98/08812 (22) International Filing Date: 1 May 1998 (01.05.98) (30) Priority Data: 08/850,403 2 May 1997 (02.05.97) US (71)(72) Applicants and Inventors: MULHEARN, Michael, J. [US/US]; 120 Overhill Road, Bronxville, NY 10708 (US). GUILD, Marc [US/US]; 45 Ellison Avenue, Bronxville, NY 10708 (US). VERGARI, Bohn, C. [US/US]; 24 Oriole Avenue, Bronxville, NY 10708 (US). (74) Agents: COGGIO, Brian, D. et al.; Pennie & Edmonds LLP, 1155 Avenue of the Americas, New York, NY 10036 (US). | (81) Designated States: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, GW, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> | |

(54) Title: METHOD AND APPARATUS FOR PROVIDING GREETING MESSAGE IN TELEPHONY

(57) Abstract

Telephony method and apparatus (100) for providing a greeting message (215) to a caller when the caller is about to make a call. To provide a greeting message to a caller, the offhook condition of the caller's telephone is first detected (205). A greeting message is then provided to the caller (215) before the caller dials any number (220). A dial-tone may be provided before and/or after the greeting message (310). The greeting message or the dial-tone is terminated when the caller dials any number (315). The greeting message may be music, announcement or advertisement.



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METHOD AND APPARATUS FOR PROVIDING
GREETING MESSAGE IN TELEPHONY

Field Of The Invention

5 The present invention relates to telephony and in particular, providing a greeting message to a caller who picks up a telephone handset and is about to enter a telephone number to make a call.

10 Background Of The Invention

 In conventional telephony, when a caller picks up a telephone handset to make a call, the off-hook condition of the telephone is detected by a local telephone central office and a dial-tone is provided to the caller's telephone. After
15 the caller dials or enters any number with a telephone keypad, the dial-tone is terminated by the central office. After a complete telephone number is entered by the caller, the caller's telephone is connected to a destination telephone, the number of which was dialed. A ring signal is
20 then provided to the destination telephone, which is also heard by the caller at the caller's end. When the destination telephone is answered, the local office detects it and terminates the ring signal. The caller and the person answering the call are thus connected. In conventional
25 telephony, no greeting message is provided to the caller by the central office, prior to the caller entering any telephone number.

 It is therefore an object of the present invention to provide a greeting message to the caller after the caller
30 picks up the telephone, but before any number is entered by the caller.

Summary Of The Invention

The present invention provides method and apparatus for providing one or more greeting messages to a caller who is about to make a call, but before the caller enters or
5 dials any telephone number.

In accordance with the present invention, one or more greeting messages are provided to the caller in the following manner: first, after the caller picks up the telephone handset but before the caller enters any number, a
10 central telephone office detects the off-hook condition of the telephone and send a greeting message to the caller. After the caller enters the telephone number of a person whom the caller wishes to contact, the central office then connects the caller's telephone to the telephone of the
15 person who is called, in accordance with the telephone number entered by the caller.

In a preferred embodiment, a dial-tone is provided to the caller following the greeting message, but before the caller enters any number. Moreover, the greeting message or
20 the dial-tone is terminated when any number is entered by the caller. A dial-tone may also be provided before the greeting message such that the caller first hears the dial-tone and then the greeting message.

A telephone switching apparatus in accordance with
25 the present invention includes a storage device for storing therein one or more greeting messages and retrieving means for retrieving such greeting messages for providing them to a caller. The apparatus further includes detecting means for detecting the caller's telephone being in an off-hook
30 condition, and switching means for switchably connecting the caller's telephone to a destination telephone, the number of which has been entered or dialed by the caller.

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Brief Description Of The Drawings

A more complete understanding of the invention may be obtained from the following description and accompanying drawings in which:

- 5 Fig. 1 is a block schematic diagram of a telephone switch apparatus in accordance with the present invention;
 Fig. 2 is a flow chart illustrating the operation sequence of a preferred method of the present invention; and
 Fig. 3 is a flow chart illustrating a sub-sequence
10 of operation of the method illustrated in Fig.2.

Description Of The Preferred Embodiment

Fig. 1 illustrates a block diagram of a telephone switching apparatus of the present invention. In accordance
15 with the present invention, a telephone switching apparatus 100 comprises a storage device 105 for storing therein one or more greeting messages, and detecting means 110 for detecting a caller's telephone 115 being in an off-hook condition. The switching apparatus also includes a retrieving means 120 for
20 retrieving the messages stored in storage device 105 and providing the message to caller telephone 115, when caller telephone 115 is in an off-hook condition, but before any number is entered or dialed by the caller. Switching means 125 is included in the apparatus to connect caller telephone
25 115 to a destination telephone 130, in accordance with the telephone number entered by the caller.

The greeting message provided to the caller in accordance with the present invention may be any kind of audio messages, including, but not limited to, music, an
30 announcement or an advertisement. For example, the greeting message may be "Thank you for using NYNEX®" or "Thank you for drinking Coca-Cola® and have a nice day."

Storage device 105 may be an analog or digital storage device, and preferably a digital storage device. The
35 greeting messages are preferably stored in the storage device in a digital form, thus compatible with existing telephone switching equipment. Detecting means 110, switching means

125 and retrieving means 120 include, but not limited to, existing telephone switching equipment that perform the same functions.

Figs. 2 and 3 illustrate a flow chart of operation
5 sequence of a preferred method of the present invention.

Referring to Fig. 2, after a beginning step 200, a step 205 is performed to determine whether or not a caller's telephone is in an off-hook condition. If the caller
telephone is not in an off-hook condition, step 205 will be
10 repeated, as indicated by an arrow 210. If, after performing step 205, it is determined that the caller's telephone is in an off-hook condition, a greeting message is then provided to the caller telephone in a step 215. Alternatively, step 215 may include first providing a dial-tone to the caller
15 telephone and then the greeting message, but before any number is entered by the caller.

After step 215, a step 220 is performed to determine if the caller has entered any number (including any single digit number) at the caller's telephone. If any
20 number is entered by the caller, the central telephone office will terminate the message in a step 225, and connects the caller telephone to a destination telephone, in accordance with the telephone number entered by the caller.

If no number is entered by the caller when the
25 greeting message is being provided to the caller, a sub-routine illustrated in Fig. 3 will be performed. At first, a step 300 will be performed to continue to provide the message to the caller. At the next step, step 305, it determines if the greeting message has ended. If the greeting message has
30 not ended, step 300 will be repeated. Upon detecting that the greeting message has ended, a dial-tone is then provided to the caller in step 310. Thereafter, when the caller enters any number, the dial-tone is terminated and the caller is connected to a destination telephone, in accordance with a
35 telephone number entered by the caller. It should be noted that in the preferred embodiment, during the time the greeting message or the dial-tone is being provided, entry of

any number by the caller will terminate the greeting message or dial tone.

Numerous other modifications, variations and adaptations may be made to the described embodiments without
5 departing from the scope of the invention as defined in the claims.

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What is claimed is:

1. Method for a central telephone office to provide a greeting message to a caller who is about to make a
5 telephone call, comprising the steps of:
detecting a telephone of the caller being in an off-hook condition when the caller is about to make a call;
providing a greeting message to the caller before any number is entered by the caller; and
10 sending a ring signal to a destination telephone after the caller enters a telephone number.
2. The method of claim 1 further comprising the step of providing a dial-tone to the caller after the
15 greeting message is provided, but before any number is entered by the caller.
3. The method of claim 1 further comprising the step of providing a dial-tone to the caller before providing
20 a greeting message to the caller.
4. The method of claim 1 further comprising the step of terminating the ring signal after the destination telephone is answered, thereby connecting the caller to the
25 person answering the destination telephone.
5. The method of claim 1 further comprising the step of terminating the greeting message when the caller enters any number.
30
6. Apparatus for a central telephone office to provide a greeting message to a caller who is about to make a telephone call, comprising:
a storage device for storing therein one or more
35 greeting messages;
means for detecting a telephone of the caller being in an off-hook condition;

means for retrieving the greeting message and for providing the greeting message to the caller before any number is entered by the caller; and

means for sending a ring signal to a destination
5 telephone in accordance with a telephone number entered by the caller.

7. The apparatus of claim 6 further comprising means for providing a dial tone to the caller after the
10 greeting message is provided.

8. The apparatus of claim 6 further comprising means for providing a dial-tone to the telephone of the caller prior to providing the greeting message.
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9. The apparatus of claim 6 further comprising means for terminating the ring signal after the destination telephone is answered, thereby connecting the caller to the person answering the destination telephone.
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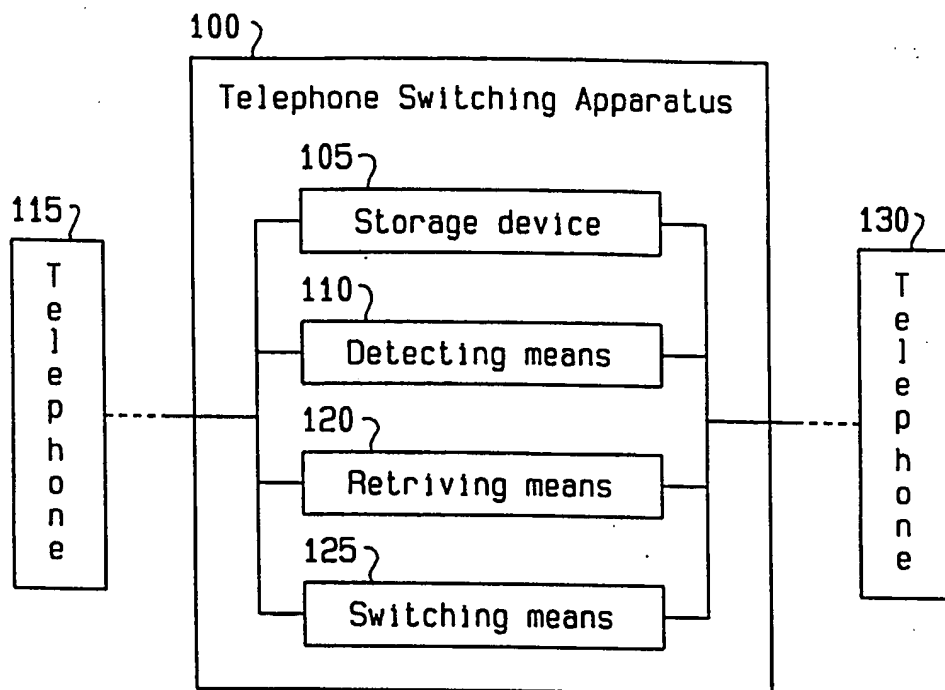


FIG. 1

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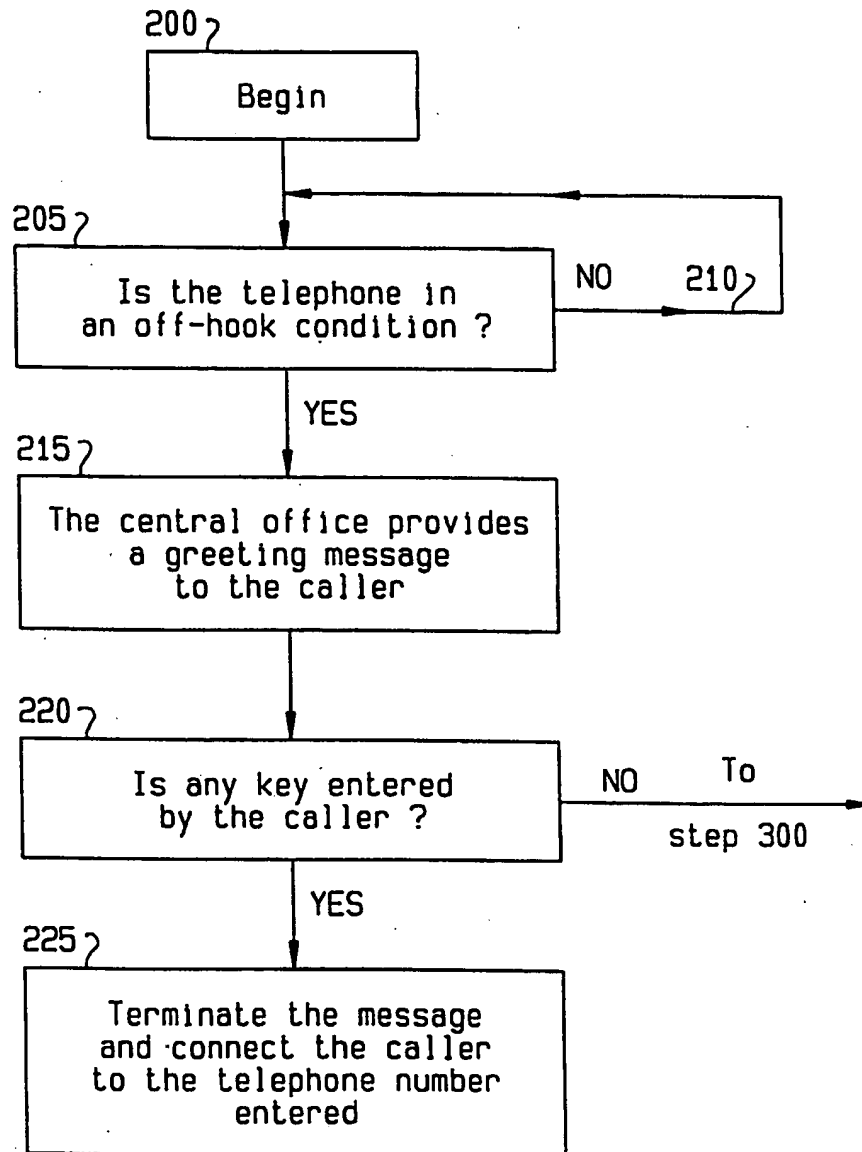


FIG. 2

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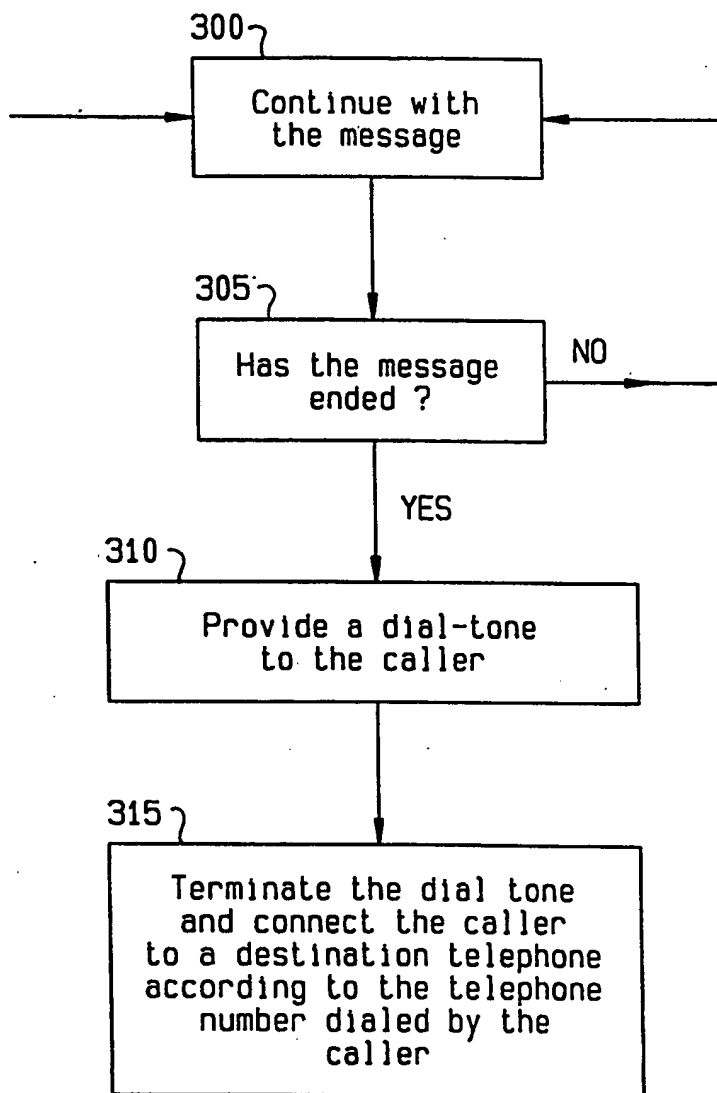


FIG. 3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US98/08812

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :H04M 1/64

US CL :379/67, 88, 89, 201, 350, 372

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 379/67, 88, 89, 201, 350, 372

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS

search terms: voice message, advertisements, dial tone, off-hook

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | US 5,535,264 A (STARR et al.) 09 July 1996 Figure 3; Figure 7; abstract; col.5,ln.2-col.6,ln.31. | 1-9 |
| X, P | US 5,652,784 A (BLEN et al.) 29 July 1997, Abstract; figures 2 and 4; col.4,ln. 63- col.5,ln.30; co.5,ln.13-16; col.8,ln.13-35; col.8,ln.56-63; col.33,ln.10-50. | 1-2, 4-7, 9 |
| X | US 5,150,399 A (YASUDA) 22 Septmeber 1992,col.8,ln.23-col.9,ln.9. | 1-4,6-9 |



Further documents are listed in the continuation of Box C.



See patent family annex.

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